



Center for Stormwater Technology Advancement (CSTA)

Stakeholder Partnership to Improve Water Quality

CSTA – Problem Statement

- Cost of Chesapeake Bay TMDL – Virginia Senate Finance Committee 2011 Report –

Chesapeake Bay TMDL Cost (Estimated)	Range
Total local and VDOT capital costs	\$9.4B to \$11.5B
Annual Cost*	\$1.0B to 1.2B / year
Average stormwater bill per household	\$240 to \$300
Total capital cost for Fairfax County	\$641M to \$845M

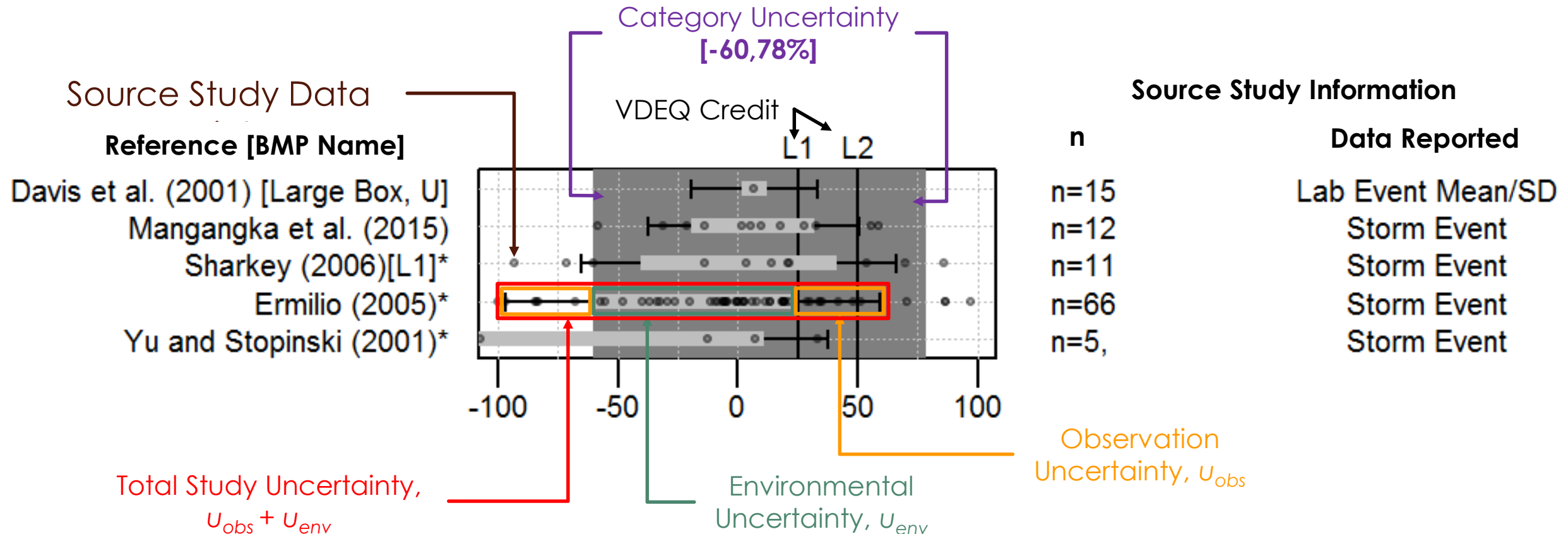
*assumes financing over 30 years at 5.5% interest rate and O&M costs estimated at 5% of construction cost: Source Greely and Hansen Environmental Engineers



CSTA – Problem Statement

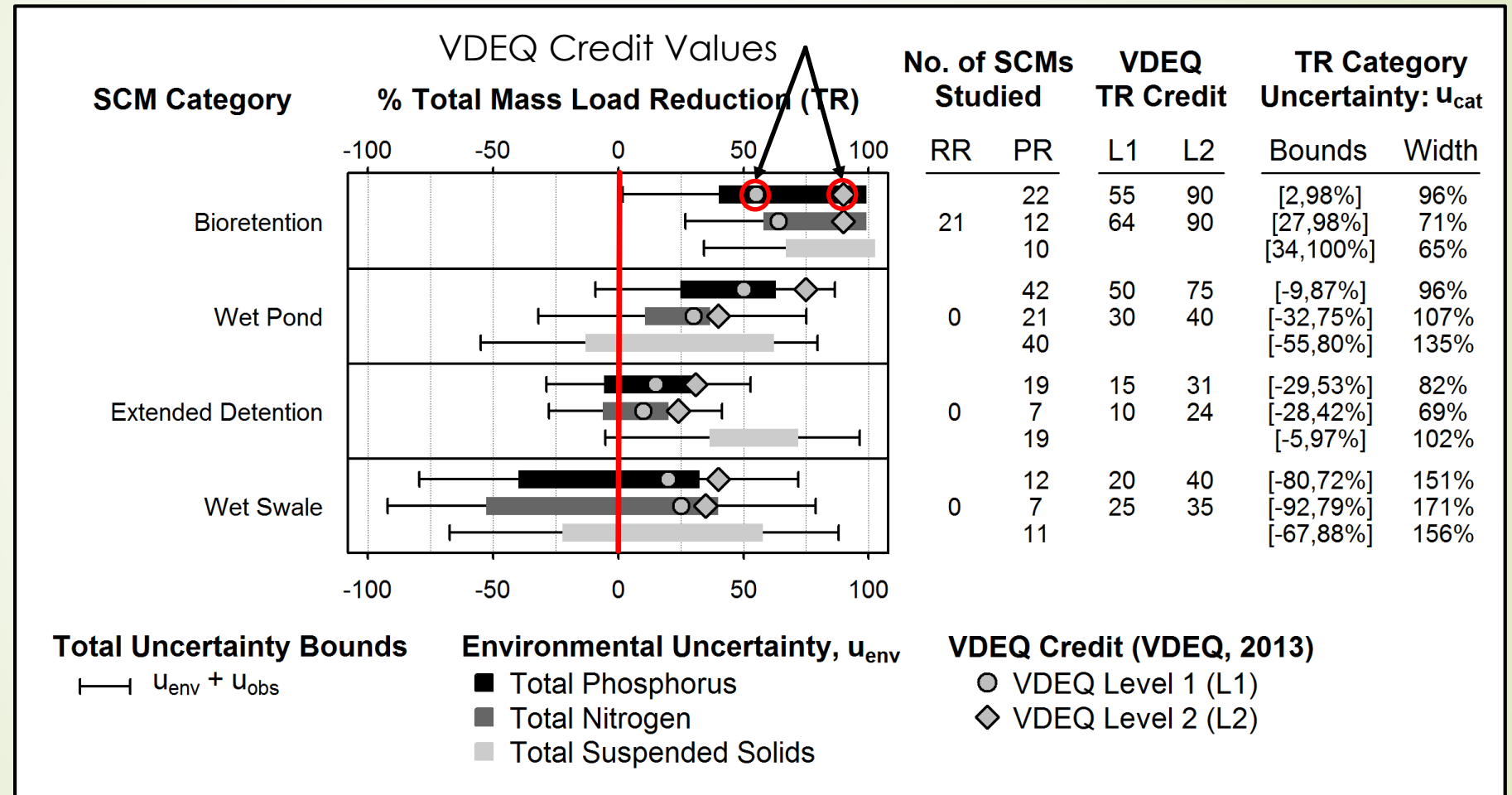
- The science of effectively treating stormwater needs to be advanced
 - Center for Watershed Protection – National Pollutant Removal Performance Database – Version 3, September 2007
 - Limited data – BMP research is still relatively young
 - Range of data is high – further work is necessary to identify factors that lead to either poor or good performance
 - Efficiencies and credit calculations continue to evolve – better science will result in better decision making on what practices provide the best bang for the buck.
 - Limited studies / information on performance of practices over time and what maintenance protocols should be employed.
 - There is a dearth of data/research in the areas of maintenance practices / performance over time

CSTA – Problem Statement



Bioretention - Total Phosphorus % Concentration Reduction

CSTA – Problem Statement




15 BMP Categories (only 4 shown)



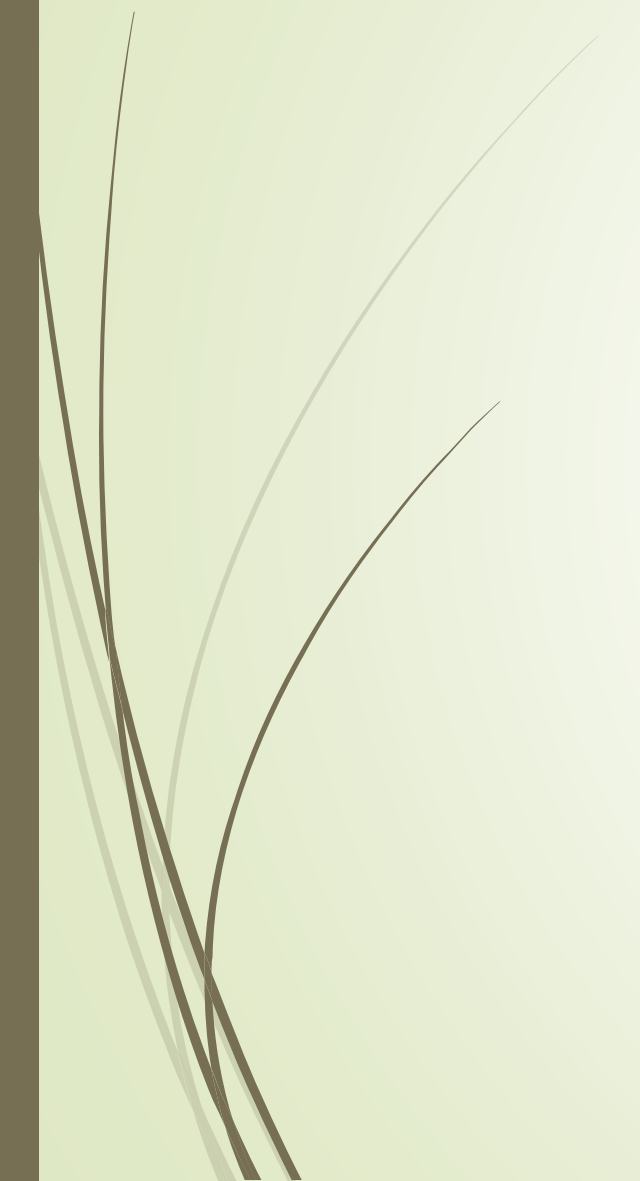
CSTA – Proposal



- Create a partnership between the Commonwealth, local governments, VDOT, the private sector, and state universities to support a research center to better address national and state clean water goals.
- Research is used by the Commonwealth to guide decision making in future ordinance and permit requirements
- Shared governance structure through an oversight board
- Funding
 - Operating cost estimated at \$600K per year
 - Shared funding from VT, ODU, private sector (VSMP fee increase), localities (MS4 permit increase), and affiliate membership



CSTA – Benefits



- Improve the science – with improved knowledge comes better decision making, smarter investments, and more predictable outcomes
- Adaptive management feedback – with DEQ partnership and stakeholder governance research will be directed and utilized to improve implementation of clean water goals
- Credibility of results - state universities bring an unbiased and heightened scientific rigor to the research efforts and performance results
- Preparing future thought leaders – partnership with the universities will fund graduate level research that will help prepare future leaders
- Path forward for innovative practices and technology development – research center can support the acceptance of innovative practices
- Provide a Virginia solution to water quality issues unique to Virginia
- Provide outreach and education to the practicing community



CSTA – Proposal – How we get there -

- Fostering stakeholder partnerships
- Legislative approach (attached)
 - Change in the VSMP fees
 - Change in the MS4 fees
 - Establishment of CSTA and the governance board
 - How data will be used by the Commonwealth